

# Efficiency in the outpatient department: the lessons from urology

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To determine the scope for improvements in efficiency in the outpatient management of urological patients, a retrospective analysis was undertaken of outpatient records from one consultant's practice in a regional teaching hospital. Two hundred consecutive patients referred between March and May 1992 were studied for 1 year after referral. Each outpatient visit was judged to be unavoidable or potentially avoidable.

Of referrals, 72% were in one of four diagnostic categories (bladder outflow obstruction; haematuria; scrotal disorders; frequency/dysuria syndromes). Of these patients, 90% were seen only once or twice for each episode of illness. Of the visits, 150/347 (42%) were potentially avoidable.

Patients with suspected bladder outflow obstruction, haematuria and scrotal disorders should undergo imaging of the relevant anatomy before referral. Patients with haematuria should be referred directly for a flexible cystoscopy after imaging. Urologists need to educate general practitioners more clearly about the indications for the treatment of scrotal swellings in elderly men and mild bladder outflow obstruction in middle-aged men. Patients need not be reviewed routinely after transurethral resection of the prostate for benign prostatic hypertrophy or after investigations for haematuria have revealed no serious abnormality.

Specialist urological consultations are a valuable resource and must be used efficiently. Inefficiency in outpatients may result from inappropriate referrals, inadequate primary investigation by the general practitioner or unnecessary review of routine cases (1,2). Improvements in efficiency allow more patients to be assessed in an

outpatient session, thereby reducing waiting times before an initial outpatient consultation. Only once efficiency is maximised can the areas most in need of fresh resources be identified. Currently, monthly urological outpatient costs are around £18 000 in a teaching hospital (3).

In considering efficiency in outpatient practice there are three areas deserving particular attention:

- 1 The number of patients treated and reviewed. Is review necessary when treatments are predictably effective?
- 2 Patients who are investigated and reviewed. Can the investigations be predicted and ordered before the initial clinic visit?
- 3 Patients who are discharged with no treatment. Can specialist referral be avoided by better education of general practitioners about the indications for investigation and treatment in common urological conditions?

## Methods

The outpatient records of 200 patients referred between March and May 1992 to a single urologist (DC) were reviewed. Patients were assigned a diagnostic category (Table I). The action taken at each clinic visit in the 12 months following referral was recorded and categorised as follows: book inpatient, book day surgery, treat and review, investigate and review, treat and discharge, or discharge. Each clinic visit was identified as either unavoidable or potentially avoidable.

## Results

The 200 patients made 347 visits to outpatients (mean 1.75; range 1-5). Nearly three-quarters (72%) of referrals

Table I. Avoidable visits by diagnostic category

	Bladder outflow obstruction	Haematuria	Scrotal disorders	Frequency dysuria	Penis	Stones	Infections	Others
Referrals	66	31	31	17	13	11	8	23
Visits	130	47	45	34	20	22	11	38
Avoidable visits	56 (43%)	43 (91%)	24 (53%)	None	7 (35%)	5 (22%)	5 (45%)	10 (26%)

were in one of the four commonest diagnostic categories. One-third of referrals were for suspected bladder outflow obstruction. Of the visits, 42% were deemed potentially avoidable. The results in each diagnostic category are shown in Table I.

An analysis of the actions taken at the initial clinic visit for patients with bladder outflow obstruction, haematuria and scrotal disorders is shown in Fig. 1.

Of 66 patients, 41 (62%) referred with suspected

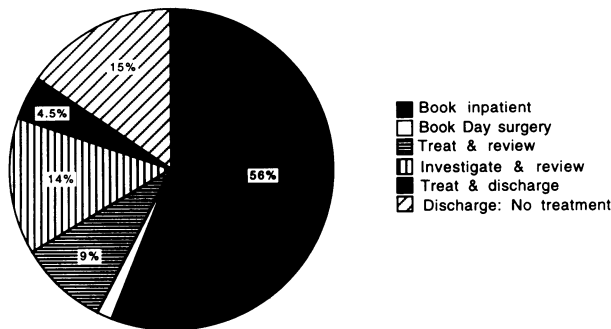


Figure 1a. Bladder outflow obstruction—initial visit (n = 66).

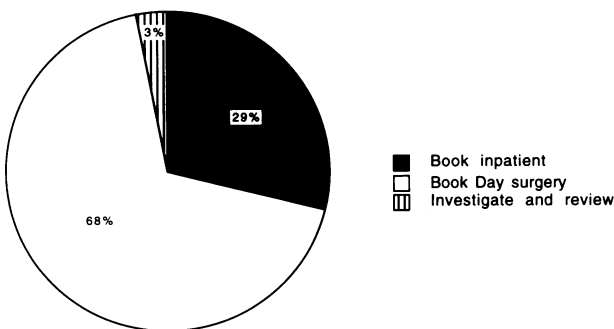


Figure 1b. Haematuria—initial visit (n = 31).

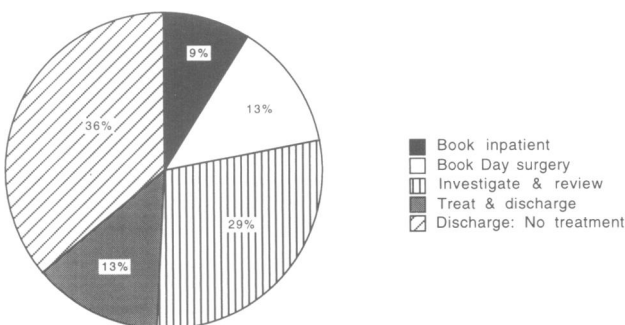


Figure 1c. Scrotal disorders—initial visit (n = 31).

bladder outflow obstruction underwent transurethral resection of the prostate (TURP). Of these patients, 37 (92%) were booked for surgery after just one clinic visit. Thirty-eight patients underwent TURP for benign disease and all were reviewed in outpatients 6 weeks later. Of these follow-up visits, 33/38 (85%) were deemed avoidable as the patients were discharged with no change in treatment.

All 31 initial visits made by patients with haematuria were considered avoidable as patients were invariably investigated by intravenous urogram (IVU) and cystoscopy. Twelve patients were reviewed unnecessarily in outpatients despite no serious cause for haematuria being identified.

One-third of patients with scrotal problems were investigated with ultrasonography and reviewed. No patients were reviewed in outpatients after minor scrotal surgery.

No visits made by patients with frequency/dysuria syndromes were judged avoidable.

### Discussion

In the UK, urological patients wait, on average, 7 months to be seen in outpatients (4). In Oxford the average delay is around 4 months, but nevertheless delays of this order are no longer acceptable and the need for fresh approaches to outpatient practice has been highlighted (2,5). The forces dictating change include consumerism, the purchaser-provider relationship, medical progress and the Patient's Charter.

There appear to be four solutions to the delays: An increase in the number of specialists, the number of clinics, the number of doctors at each clinic, or improvements in efficiency. A reduction in the number of visits a patient makes to the clinic for each episode of illness allows more new referrals to be seen.

Efforts to improve efficiency should be directed at the management of patients in the four diagnostic groups which account for 72% of referrals.

The greatest scope for improvements in efficiency was in the management of patients with haematuria. No discriminating diagnostic information appeared to result from the initial clinic visit. All patients were investigated by cystoscopy. We recommend imaging of the upper urinary tract (either with an IVU or by ultrasonography) before a flexible cystoscopy with abandonment of the initial visit. Cytological examination of the urine for

malignant cells can also be performed before referral. Adoption of these policies will probably lead to a more rapid diagnosis (6). Review of patients with haematuria in whom no serious cause is identified (usually men with bleeding from enlarged periprostatic veins) is unnecessary (6).

In suspected bladder outflow obstruction, routine preclinic ultrasonography of kidneys and bladder and urinary flow rate testing would increase the chances of an accurate diagnosis at the first visit. In addition, obstructive nephropathy would reliably be identified earlier in its natural history. The urinary flow clinics could be organised and staffed by a nurse practitioner. Patients discharged after the initial visit with no treatment were usually young with mild symptoms. Clearer guidelines to general practitioners are needed on the indications for, and side-effects of treating bladder outflow obstruction in younger men.

Routine review after TURP appears unnecessary as 85% of patients in this and other larger studies (7) have an excellent outcome. This policy would inevitably be contentious; however, a recent questionnaire has shown that 90% of general practitioners in Oxfordshire are happy to manage the patients themselves in the community, as long as the safety net of rapid re-referral exists (8). A single routine review at 6 weeks or 3 months is too late to deal with the early complications of bleeding, infection and retention, and yet often too early to deal with the late complications of persistent irritative symptoms or recurrent obstruction; this also makes a single outpatient attendance an inadequate basis for effective audit, which may be more efficiently performed by other means (9). A policy of not reviewing patients routinely still allows patients with problems to be seen, once re-referred.

If a policy of discharging patients after TURP without routine review is to be successful, the general practitioners must be willing and the quality of care in the community must be high. In addition, patients with unsuspected carcinoma of the prostate need to be identified by ensuring there is a formal review of histological reports.

One-third of patients with scrotal disorders were discharged after the initial visit with no treatment. These were usually elderly patients with minimally symptomatic hydroceles or epididymal cysts. Clearer guidelines to

general practitioners on the indications for treating scrotal disorders are needed. Another third of scrotal disorders were investigated by ultrasonography and reviewed. We recommend ultrasonography of the scrotum before referral, except perhaps in men aged 20–40 years in whom a significant risk of testicular cancer exists, and investigation might slow referral.

One approach to improve outpatient efficiency is to reduce the number of habitual re-attenders. Although a worthy goal, in our practice it would have little impact on outpatient efficiency as only two patients (1%) made more than four visits. It is remarkable that in an outpatient practice where 90% of patients are seen only once or twice, 42% of visits were nevertheless potentially avoidable.

We believe this approach to identifying means of improving outpatient efficiency is valid, may help improve efficiency, contain costs, and help reduce the delays patients face before a urological consultation. The exercise is recommended to doctors in other specialties.

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